United States Department of Agriculture | Forest Service | Northeastern Area State & Private Forestry | 180 Canfield Street Morgantown, WV 26505-3101

File Code: 3410 (NA-03-17)
Date: August 4, 2003

Subject: 2003 Aerial Sketchmapping Survey

To: Mary O'Brien Reddan, Forest Supervisor
Wayne National Forest

On June 18 and 19, 2003, Rick Turcotte of Forest Health Protection (FHP), Morgantown, along with Dave Greenwood, Max Norris, and Samantha Ferguson, conducted an aerial sketchmapping survey of the Wayne National Forest. The accompanying maps show the general locations and types of damage observed during these flights.

This year, gypsy moth caterpillars noticeably defoliated 62 acres of oak forest within the Marietta Unit. The defoliation appears to be concentrated in the southwestern corner of the unit and was locally heavy. Many individual oaks were defoliated and have since refoliated, giving them a lime green color. The gypsy moth fungus (*Entomophaga maimaiga*) (Figure 1) and virus have been active in this area as evidenced by the high numbers of cadavers present on tree boles. Because the Marietta Unit is now within the generally infested gypsy moth area, it is only a matter of time before widespread defoliation occurs. The cool, wet weather this past spring provided ideal conditions for the gypsy moth fungus, which is expected to drastically reduce, but not eliminate, next year's populations. Past experience with the fungus and virus have shown that devastating outbreaks can still occur after epizootics have reduced the population.

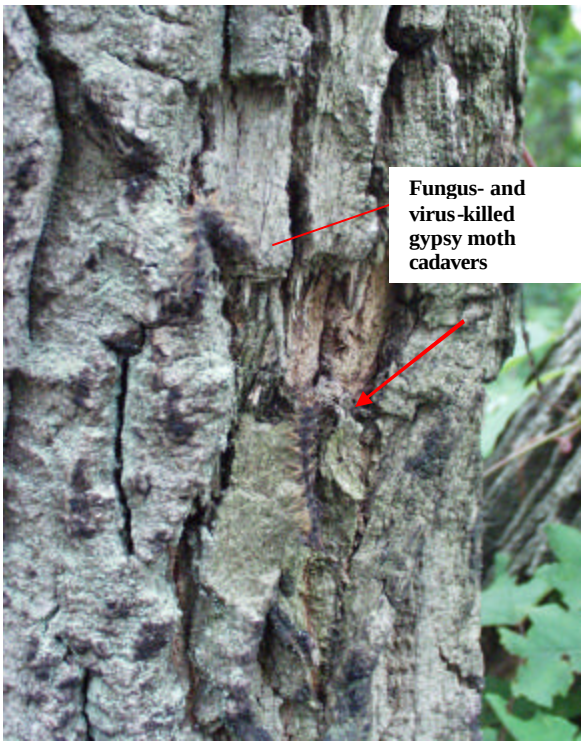

Figure 1. Fungus-killed gypsy moth cadavers.

It is highly recommended that the forest review its gypsy moth management plan or work with this office to prepare one. Development of a gypsy moth management plan is needed to help prioritize areas for surveys and intervention. Even if the forest decides not to suppress populations, it is recommended that a plan be adopted and an analysis be performed to document the "no action" alternative.

Anthracnose leaf blights and leaf spot injury were also observed throughout the forest (Figures 2 and 3, page 2) on a variety of hardwoods (chestnut oak, white oak, maples, sycamore, etc.), but FHP personnel never isolated the causal agents. Most of the observed damage due to these leaf diseases was confined to the mid and lower canopy of the overstory trees, but damage was also evident on saplings and poles. Anthracnose is caused by native fungi, and wet, cool spring weather such as we have had this season promotes this disease. Severity varies with tree species and ranges from light to complete defoliation, which reduces growth and predisposes affected trees to other stress factors. The scorched, blotched, and tattered fungus-infected leaves give trees an unsightly

and reddish-brown appearance that is visible from a distance. Anthracnose and other leaf diseases will continue to attack leaves until hot weather arrives.

Figure 2. Anthracnose lesions on American beech.

Figure 3. Leaf spots and anthracnose lesions on maple.

There was heavy defoliation throughout much of southern Ohio this spring, the effects of which were still observable during this flight. We mapped 8,837 acres of scattered oak defoliation within the proclamation boundaries of the Ironton Ranger District. A complex of native lepidopterans (See FHP Report No. NA-03-10) that were active this spring caused this defoliation. Ice storm damage (See FHP Report No. NA-03-02) was again mapped on the Ironton District. We observed 9,203 acres of light to moderate damage and 2,586 acres of heavy damage.

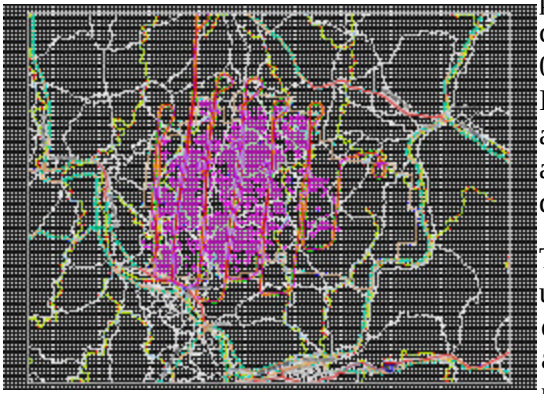

Figure 4. Actual aircraft flight path over the Ironton Ranger District.

This is the first time a digital sketchmapping system was used to map areas of insect and disease activity. This new digital system will hopefully result in better mapping accuracy and a reduction in the time spent during post processing. The new system tracks the flight path of the aircraft, which will aid in confirming good coverage of the forest (Figure 4).

We ask that all field personnel continue to monitor for evidence of insect activity (such as an unusually high number of moths present in the forest in early spring, which may be a prelude to another heavy defoliation event by native spring defoliators), defoliation, discoloration, and mortality in their areas and report any insect and disease activity to the Morgantown Field Office.

I personally would also like to extend my appreciation to David, Max, and Samantha for their valuable assistance in this survey. If you or any of your staff have any questions or comments regarding this survey, please contact Rick Turcotte at (304) 285-1544.

Sincerely,

JOHN W. HAZEL

Field Representative
Forest Health Protection

Cc: District Ranger, Athens RD w/enclosures
District Ranger, Marietta RD w/enclosures
District Ranger, Ironton RD w/enclosures
RMT/MM